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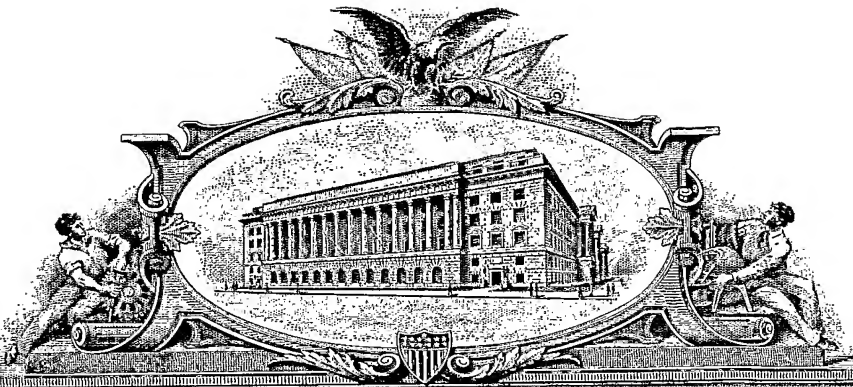
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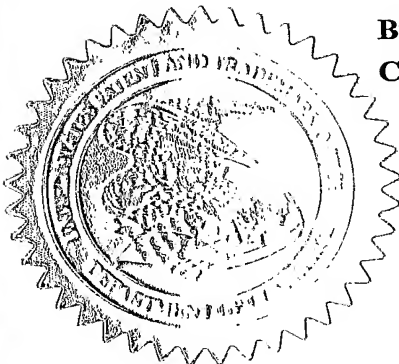
May 20, 2005

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APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A
FILING DATE UNDER 35 USC 111.**

APPLICATION NUMBER: 60/553,937

FILING DATE: March 18, 2004

PCT/CA05/00412



**By Authority of the
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Certifying Officer

13281 U.S. PTO

PTO/SB/16 (01-04)

Approved for use through 07/31/2006. OMB 0651-0032

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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

Express Mail Label No.

19587 U.S. PTO
60/553937

031804

INVENTOR(S)					
Given Name (first and middle (if any))		Family Name or Surname		Residence (City and either State or Foreign Country)	
Nigel Doug		Boast Heselton		Kelowna, BC, Canada Surrey, BC, Canada	
Additional inventors are being named on the _____ separately numbered sheets attached hereto					
TITLE OF THE INVENTION (500 characters max)					
METHOD AND APPARATUS FOR THE USE OF OZONE AS A VERICIDE					
Direct all correspondence to: CORRESPONDENCE ADDRESS					
<input type="checkbox"/> Customer Number: _____					
OR					
<input checked="" type="checkbox"/> Firm or Individual Name Fasken Martineau DuMoulin LLP					
Address 1075 West Georgia Street					
Address Suite 2100					
City Vancouver		State BC		Zip V6B 3G2	
Country Canada		Telephone 604.631.4743		Fax 604.632.4743	
ENCLOSED APPLICATION PARTS (check all that apply)					
<input checked="" type="checkbox"/> Specification Number of Pages 3					
<input type="checkbox"/> Drawing(s) Number of Sheets _____					
<input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76					
<input type="checkbox"/> CD(s), Number _____					
<input checked="" type="checkbox"/> Other (specify) Research & Analysis Report (32 pages)					
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT					
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.					
<input checked="" type="checkbox"/> A check or money order is enclosed to cover the filing fees.					
<input type="checkbox"/> The Director is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number: _____					
<input type="checkbox"/> Payment by credit card. Form PTO-2039 is attached.					
FILING FEE Amount (\$) 80.00					
The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.					
<input checked="" type="checkbox"/> No.					
<input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are: _____					

[Page 1 of 2]

Respectfully submitted,

SIGNATURE

TYPED or PRINTED NAME Frederick Kaufman

TELEPHONE 604.631.4743

Date 03/17/2004

REGISTRATION NO. 44444

(If appropriate)

Docket Number: TRE00072

USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

This collection of information is required by 37 CFR 1.51. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Provisional Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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FEE TRANSMITTAL
for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 80.00

Complete if Known

Application Number	
Filing Date	
First Named Inventor	Boast, Nigel et al
Examiner Name	
Art Unit	
Attorney Docket No.	TRE00072

METHOD OF PAYMENT (check all that apply)☐ Check ☐ Credit card ☒ Money Order ☐ Other ☐ None☐ Deposit Account:Deposit
Account
Number
Deposit
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FEE CALCULATION**1. BASIC FILING FEE**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	80.00
SUBTOTAL (1)					(\$ 80.00)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims		Extra Claims		Fee from below		Fee Paid	
Independent		-20** =		X		=	
Multiple Dependent		-3** =		X		=	

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1202	18	2202	9	Claims in excess of 20	
1201	86	2201	43	Independent claims in excess of 3	
1203	280	2203	145	Multiple dependent claim, if not paid	
1204	86	2204	43	** Reissue independent claims over original patent	
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2)					(\$)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

(Complete if applicable)

SUBMITTED BY		Registration No. 44444	Telephone 604.631.4743
Name (Print/Type)	Frederick Kaufman	Attorney/Agent	
Signature	<i>Frederick Kaufman</i>	Date	03/17/04

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19587 U.S. PTO
60/553937



March 17, 2004
File No.: TRE00072

BY COURIER

U.S. Patent and Trademark Office
2011 South Clark Place, Customer Window
Mail Stop Provisional Patent Application
Crystal Plaza Two, Lobby, Room 1B03
Arlington, Virginia 2202

Dear Sirs/Mesdames:

Re: New Provisional Patent Application
Title: METHOD AND APPARATUS FOR
THE USE OF OZONE AS A VERICIDE
Inventors: Boast, Nigel et al.

We enclose the following documents for filing in the U.S. Patent and Trademark Office:

1. Fee Transmittal;
2. Provisional Application for Patent Cover Sheet
3. Specification, together with Research & Analysis Report; and
4. Money Order in the amount of \$80.00 in payment for the prescribed fees.

Thank you for your assistance.

Yours truly,

FASKEN MARTINEAU DuMOULIN LLP

Doran Ingalls

DJI/rat
Encl.

DM_VAN/TRE0035-TRE00072/6156140.1

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Method and Apparatus for the Use of Ozone as a Vericide

ECONOMIC SOLUTIONS FOR THE TREATMENT OF SARS AND OTHER VIRUSES & BACTERIA IN THE HOSPITALITY & OTHER INDUSTRIES

The Problem.

- High global people traffic spreading emerging viruses.
- Emerging viruses such as SARS have high morbidity and mortality and can be difficult to treat.
- Virtually impossible to screen infected people and prevent them from spreading the disease.
- High risk to the hospitality industry, leading to reduced earnings and share prices of public companies in the hospitality sector.
- Other sectors such as prisons, elderly care facilities; airports and facilities used for disease control require improved cost-effective disinfection procedures to reduce the spread of disease.

The aggressive spread of SARS, an emerging virus, from Asia to other countries including Canada has occasioned considerable expenses and opportunity costs to the airline, hospitality and tourism industries as well as the health care industry. Consequently, the spread of SARS has had a devastating effect on affected countries' economies.

SARS and other emerging viruses are not the only viruses of concern. A variety of airborne, gastroenteric and enteric viruses, including varicella zoster (chicken pox), measles virus, rhinovirus (cold), influenza virus (flu), poliovirus, rotavirus, hepatitis A, norwalk virus, adenovirus, and bacteria all represent risks of contagion and infection.

Ozone has long been recognized as an effective biocide (a biochemical disinfectant) or vericide, and also a powerful deodorizer, having a number of attractive features:

- Pervasive:** Ozone is all pervasive in a closed space.
- Efficient:** Ozone is highly effective as a virucide, and is cheap to administer.
- Simple:** Installation set up and operation of ozone generators is simple.
- Affordable:** Amortizing the cost of the solution over a 4 year time period, taking into account industry standard vacancy rates, gives a cost at less than 20 cents a night.

The concentrations and exposure times required for ozone to be an effective disinfectant, and hence biocide, are known to be toxic for humans. Government agencies have therefore strongly discouraged the use of ozone to in indoor spaces. See the attached document entitled "Ozone: A Virucidal Agent for Conventional and Emerging Viruses" (referred to herein as the "Research Report") for further details.

The Solution- The safe use of ozone as a virucide.

The present invention comprises portable equipment and apparatus, specifications and operating procedures to provide adequate ozone exposure of indoor spaces to achieve an effective degree of sanitization or sterilization, followed by removal or acceleration of the half life of ozone into oxygen, and the dissipation or removal of any gaseous by-products of reaction with areas exposed to ozone

The invention includes identifying the variables and co-variables impacting the safe and effective use of ozone as a vericide in the hospitality and other industries. In summary, the invention provides for;

1. Use of corona and other types of ozone generating equipment, suitably adapted to optimize the effects of rapid, and uniform elevation of precise ozone levels for use as a biocide, in conjunction with such applications for use as a biocide on specific room configurations and on specific, and common surface areas in the hospitably and other target industries.
2. The use of such apparatus described in para 1 above and any other apparatus, including measurement devices, to control and maintain optimum concentrations of ozone to ensure that the ozone is effective over measured time periods to act as a vericide or biocide.
3. Also to simultaneously provide during such time (when ozone reaches dangerous levels to humans) that various safeguards and safety procedures are available to prevent unnecessary and harmful exposure to humans.
4. Thereafter, the acceleration of the half-life of ozone and its dissipation after its use as a biocide, including the rapid consumption of gaseous aldehyde by-products to reduce their concentrations to levels accepted as safe for human exposure.

As an example, the method may include the following steps:

- a. Inserting a suitably adapted portable ozone generator in a closed environment, such as a hotel room;
- b. Elevating and maintaining ozone levels in the closed environment to a level sufficient to act as a vericide taking into account the humidity, size and configuration, surface areas, and airflow of the closed environment;
- c. Using devices and procedures to restrict access to the closed environment while the ozone levels are elevated to prevent exposure when the ozone levels are dangerously high; and)
- d. Removing the portable ozone generator from the closed environment after the biocide process.
- e. Directly, thereafter accelerating the half like of ozone or consuming the ozone and gaseous aldehyde by-products (possibly including the use of a catalyst) for a period of time taking into account the ozone levels, the humidity, the airflow and the size of the closed environment, and surface areas, until the ozone level is below toxic levels to humans.

- f. Using devices and procedures to restrict access to the closed environment while the ozone levels are being lowered to prevent exposure when the ozone levels are dangerously high.